

REMARKS

In the Official Action the Examiner objected to the abstract and the specification. With this amendment the abstract is shortened and the specification amended with the requested update information.

In addition, the Examiner objected to claims 1-26 because the term "identification device or memory cell" was not used consistently. With this amendment, all claims using this or a similar term are corrected to provide proper antecedent basis. Thus, instead of referring back to the identification device or memory cell as simply "the ID device", for example, the full term is used each occurrence. Thus, as requested by the Examiner, consistent terminology is now employed.

All of claims 1-26 were rejected based on prior art. However, these rejections are respectfully traversed, particularly in view of the amendments now made to the claims.

The claims are not anticipated by Stinar because the claims now more definitely state that the nature of the self-contained device is a sealed can unit comprising a conductive metal casing, with serial number ID data in a one-wire bus protocol. This refers to a sealed can unit of the type made by Dallas Semiconductor and which is now well known and often used for other purposes. In some of the dependent claims this self-contained device is stated as including a microprocessor or

microcontroller, battery and read/write memory. This device, attached in the keyhead, is of primary importance in giving the key a unique serial number or identification code, so that it can be determined electronically when the key is inserted into a lock whether that key should be entitled to open that particular lock at that particular time, for example. The invention uses an off-the-shelf memory device essentially made integral in the head of a mechanical key.

A review of the Stinar patent shows that it contains circuitry within the keyhead, but not a self-contained device or unit as defined in the claims and as described in the specification. This ID device in a can, within the keyhead, is the principal concept of the present invention and is not shown or contemplated in Stinar. The applicant's concept enables any of the memory devices or ID devices manufactured by Dallas Semiconductor or similar off-the-shelf devices in a self-contained sealed can unit, to be married with a mechanical key and compactly retained therein in a low-profile manner.

Thus, Stinar clearly is not a proper §102 reference against the claims as amended.

Nor would the subject matter of any of the claims be obvious over Stinar, alone or in combination with the other references cited by the Examiner. One must consider a person of ordinary skill in the art at the time this invention was made, which is 1992 for most of the claims. The secondary references Seckinger

and Bolan would not have provided motivation to one of skill in the art to modify the Stinar automotive key, which has custom circuitry merely contained within the keyhead, not a self-contained two-terminal can as claimed, to arrive at what is being claimed in this application. The Bolan patent merely shows a typical use of a Dallas Semiconductor memory cell or touch memory device. In fact, Bolan was apparently an employee of Dallas Semiconductor, as the patent is owned by Dallas Semiconductor. Bolan's disclosed use of such a memory cell or touch memory device of Dallas Semiconductor is a typical use for such a device. Bolan discloses a hand held "wand" for reading electronic tokens, i.e. the memory cells of Dallas.

The Examiner's comments read as though the Examiner assumes the "token" of the Bolan patent is incorporated within some type of key, or perhaps within the disclosed wand. However, this is not the case. The wand device has other circuitry, and is designed to read a series of memory cells by making contact with those memory cells. What Bolan actually discloses is the use of tokens or memory cells as identifiers. Each memory cell or token has a unique serial number. For example, the wand device disclosed in Bolan might be used in a manufacturing context, and a different memory cell or token might be adhered to each of a large number of different cartons or boxes of parts, or other types of merchandise, and the wand is used as a convenient reader of the memory cells.

Basically, as regards the present invention, Bolan merely describes the Dallas Semiconductor memory cell itself, and nothing else of relevance. The memory cell itself is certainly acknowledged as a prior product relative to the present invention, which incorporates such a memory cell as part of the mechanical key invention. The wand of Bolan has no resemblance to a key, it is secured to a user's finger, and it is used rapidly to make contact with a number of such memory cells to read them, in order to collect data, take inventory, account for or charge for products purchased at retail, etc.

Thus, the purpose of citing Bolan as teaching anything relative to the present invention is not understood. Certainly the Dallas Semiconductor memory cell or identification device, in a two-terminal can, is background relative to this invention, and the use of such a device is an important part of the invention. This may be the only reason the Examiner cited Bolan, but that is not clear from the action.

Regarding Seckinger, this adds nothing significant to the combination proposed by the Examiner. The circular device 10 which is received in the key is a battery, similar to a watch battery. The relevance of the battery within the key is not readily apparent. Seckinger shows his circuitry as custom circuitry which is mounted in a custom, complicated recess in the keyhead, with five isolated contacts. It teaches the antithesis of the present invention, where all ID circuitry, which may

include a microcontroller and battery, are contained within a self-contained can unit with a one wire bus protocol.

On the issue of obviousness, the Examiner says at page 6 "if one wire bus is not clear in Stinar then it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a one wire bus protocol in the key of Stinar in view of the one wire bus used in Bolan as a key or token because this is suggested by the communication over one data terminal in Stinar and because Bolan includes advantages such as a sealed durable package." The Examiner's reference to a key disclosed in Bolan is not understood. There is nothing about a key that accesses a lock or that in any respect acts as a key, in the Bolan reference. The Bolan patent merely suggests that these tokens (which were at that time envisioned by Dallas Semiconductor as being ubiquitous and used on nearly all retail items and for inventory control) may be read by a finger-mounted device, so as to enable quick reading a series of such memory cells or "tokens". There is no key or key function disclosed. Thus, even though these DS memory cells or touch memory devices inherently have the one wire bus protocol, this does not indicate Bolan has any teaching toward the invention.

The Examiner again applies this reasoning, which is submitted to be mistaken reasoning, at page 6, last two lines through page 7, middle of the page. The Examiner says at page 7, "it would have been obvious. . . to have included a one wire bus

protocol in the key of Seckinger in view of the one wire bus used in Bolan as a key or token because this is suggested by the communication over one data terminal in the key of Stinar. . . ." Again, this is not correct, because Bolan does not disclose a key or anything resembling a key, and the invention claimed in this application is a key. This is not critical and shows that the Examiner's reasons in support of obviousness and motivation are fatally flawed.

Another statement of the Examiner is not understood, or if understood, does not follow. At the top of page 8, the Examiner says, "Regarding claim 14, the sealed can including a microcontroller would have been obvious in view of the processor on a flexible circuit board connected to battery in Seckinger." This does not follow because Seckinger teaches the use of a printed circuit board on a key, with the key hollowed out appropriately to receive such a printed circuit board, a custom circuit in contrast with what is now being claimed. This is the heart of the issue, and it is submitted that Seckinger teaches opposite the present invention, by teaching the hollowing out of the keyhead to receive such a printed circuit board, rather than the use of a self-contained sealed can. Like Stinar, Seckinger merely teaches a circuit board on a key.

In an alternative rejection in paragraph 11(p. 8), and also in the rejection in paragraph 12 and paragraphs 13 and 14 of the Official Action, the Examiner brings in the Lemelson patent. As

pointed out by the Examiner.

It is true that, at column 4, lines 31 et seq., Lemelson briefly mentions an embodiment of a key wherein the "microminiature circuit 38 may be encapsulated within a button-like housing", which would be bonded to the keyhead, and could extend through a hole in the keyhead. However, the context of this statement must be understood. First, Lemelson has no drawing to support this expression of a bare concept. Secondly, Dallas Semiconductor chips in a self-contained can unit did not exist in 1978 when the Lemelson patent application was filed. They appeared around 1989, and there was nothing like them from any other manufacturer. Further, Lemelson merely says that his circuit can be in a "button-like housing", and says no more. He does not state that this would be a two-terminal metal can with opposed terminals on opposed sides in a one-wire bus protocol. The Lemelson "button" could likely be a plastic covering over the circuitry, with multiple wires extending out. There is absolutely no indication that Lemelson envisions a one-wire bus protocol with a memory cell or I-button or touch memory device which did not even exist for approximately another ten years. More likely Lemelson is simply suggesting a circuit can be encapsulated for compactness, not for modularity and the ability to use an off-the-shelf device in a key, which is an important feature of the present invention.

Still further, Lemelson's circuit does not do what the

memory cell or identification device of the present invention does. Lemelson's circuit 38 emits a coded short wave radiation, for the purpose of enabling the engine of a car to be started when the mechanical key is turned.

The Examiner mentions that Lemelson had some sort of motivation to use such a button for the purpose of sealing the circuits from corrosion. However, the cited passage of Lemelson at column 1, line 5 through column 2, line 10, is not about the button-like housing, but is about the overall keyhead capsule of plastic.

It thus seems manifest that the Lemelson reference, though briefly and cryptically speaking of a "button-like housing", fails to disclose the use of a memory cell or identification device in a sealed metal casing, the sides of which are isolated and serve as two terminals in a one-wire bus protocol. This is true even if one assumes Lemelson describes a metal casing (which does not.) Such memory cells as described in the claims did not exist at the time, and this statement made by Lemelson in 1978 would seem to refer to, for example, some type of plastic or ceramic housing which would have a plurality of wire leads extending out of it, still a custom circuit but encapsulated perhaps for compactness or other reasons. This does not suggest in any way the one-wire bus memory cell in a mechanical keyhead of the present invention.

The Stinar and Seckinger references fail to teach or suggest

this invention. The two references are essentially equivalent, both teaching custom circuitry placed in a keyhead, but both references failing to suggest or supply motivation to place an encased memory cell or identification device with one-wire protocol into a keyhead, particularly with the ground side of the one wire bus memory cell grounded to metal of the key as in claim 1. The Bolan patent, as reviewed above, simply describes a Dallas Semiconductor chip in a can, as a "token", and describes a use of these tokens to identify a series of objects for keeping track of them by reading the tokens with a finger-attached wand device that makes contact with both terminals of the token. There is no key or key function disclosed in Bolan, only a reading function.

With this response a reference is disclosed, recently discovered. Blankenship Patent No. 6,609,402 issued August 26, 2003 and claims benefit of provisional applications one of which predates this application. However, the subject matter of nearly all claims in this application goes back to the Patent No. 5,367,295 filed in 1992, and thus the Blankenship patent would not be prior art against those claims. There are claims of the present application that include additional features not found in the '295 patent, but those additional featured are different from what is disclosed in the Blankenship patent. It is also noted that the Blankenship patent makes claims to subject matter which is clearly disclosed in the '295 patent and in other patents of

the applicant's chain of continuations on which this application is based, including Patent No. 5,552,777 and Patent No. 6,552,650, as well as the applicant's Patent No. 6,000,609 (not in the chain of continuations), all of which have filing dates prior to the earliest claimed priority date for the Blankenship patent.

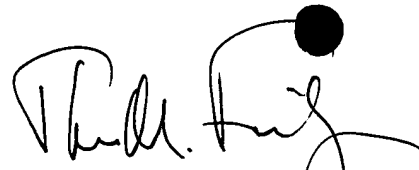
From the above discussion it seems apparent that no motivation existed in the references or elsewhere in the art to attempt the combinations put forth by the Examiner. Moreover the references do not all show what the Examiner supposes, and any attempted combination would not even produce the result now claimed.

The Examiner's main rejections are discussed above, relative to the applicant's independent claims and some of the dependent claims. Other dependent claims add further subject matter that, when considered with the main claims, further provides for the distinction from the references or any combination of the references.

It therefore seems clear that all of claims 1-26, as amended, are entitled to allowance. Favorable action is solicited. However, if the Examiner believes any issue remains, he is asked to telephone the undersigned attorney before issuing a further action.

Respectfully submitted,

Date: February 12, 2004

A handwritten signature in black ink, appearing to read 'Th. Freiburger', with a large loop at the end.

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